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ABSTRACT

This career exploration unit on candle making is one of several resulting from the rural southwestern Colorado CEPAC Project (Career Education Process of Attitude Change). This lesson plan consists of (1) five unit objectives (to understand how candles are made, to create an interest in candle making, to realize man is progressive in understanding of his surroundings, to appreciate that man can produce materials to fit his needs, and to understand that modern living depends upon beauty), (2) suggested procedures and learning activities (e.g. field trip to a candle factory), and (3) a list of workers who took part in building the candle factory. (EM)

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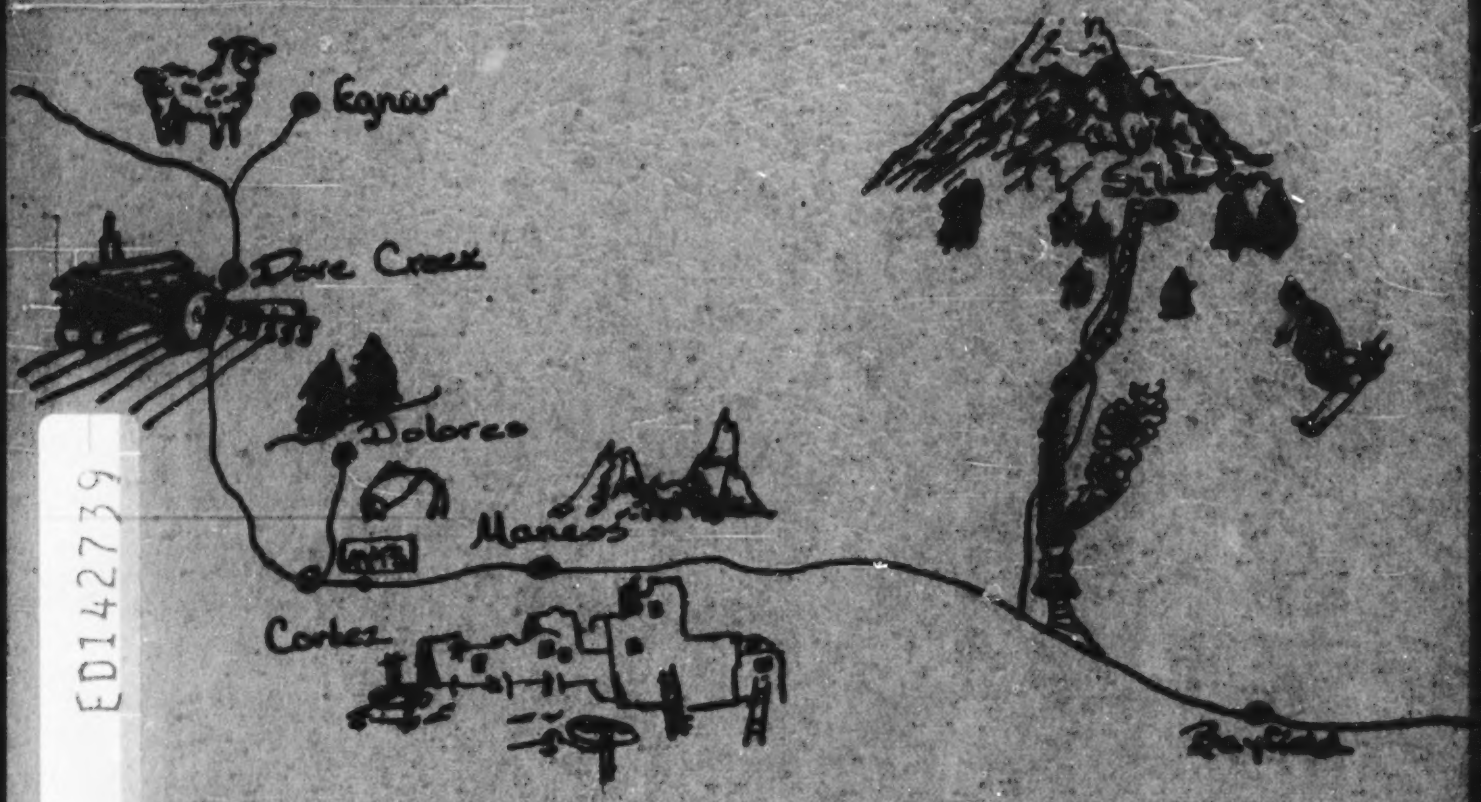

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C A R E E R U N I T

Living in the Local Community

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CEPAC: Career Education-
A Process of Attitude Change

San Juan Basin Area
Vocational-Technical School
Cortez Colorado

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FOREWARD

This career unit was prepared by Edna Robb, Nancy Parsley, Mary Kaye Robb, Carolyn Robb and taught in their classrooms as part of a comprehensive career education program. The CEPAC Career Education Project is a consortium in South-Western Colorado administered through the San Juan Basin Area Vocational-Technical School including the school districts of:

Dolores RE-4A, Dolores, Colorado
Mancos RE-6, Mancos, Colorado
Dolores County RE-1-J, Dove Creek, Colorado
San Juan County No. 1, Silverton, Colorado
Egnar No. 18, Egnar, Colorado
Montezuma-Cortez RE-1, Cortez, Colorado
Bayfield 10Jt-R, Bayfield, Colorado

The reader should note that the career education unit presented here was developed for a particular class and may or may not be adaptable to all situations. This material has been reproduced so that others may benefit from the endeavors of the author and the Career Education Project.

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CENTER OF INTEREST--LIVING IN THE LOCAL COMMUNITY

OBJECTIVES

1. To understand how candles are made.
2. To create an interest in candle making.
3. To realize man is progressive in understanding his surroundings.
4. To appreciate the truth that man can produce materials to fit man's needs.
5. To understand that modern living depends upon beauty.

PROCEDURE

1. Take a field trip to the candle factory.
2. Initiate a study of candles through a candle unit. Disucss how the first candle came about.
   a. Primitive man was roasting animals, he poked the carcass with a stick to test its tenderness. The stick covered with animal fat was easy to light and burned brightly. Thus, the torch was created. An improvement was made by dipping twigs in resin, pitch, or oil to make the light last longer. Later fat-dipped reeds took the place of twigs and were called righlights.
   b. The early Egyptians made candles, their funeral services were lighted and possibly perfumed by cone-shaped lumps of wax or tallow stuck in holders.
   c. The early Roman Catholic Church made special beeswax candles for their services.

d. By the 13th century candles were in general use. In Paris and other cities candle makers traveled from door to door restocking each household's supply of candles.

3. Discuss the manufacture of candles.

a. Although machines that make hundreds of candles at a time have generally replaced the craftsman, the basic steps have not changed.

b. First the manufacturer must prepare the wicks.

1. Wicks are braided cotton fibers that soak up the melted wax. Braiding helps the wick to bend toward the flame and be completely burnt away. Wicks are also pickled (treated in a chemical solution) to make them suck up less wax and not drown the flame.

2. An important rule in candle making is: the wider the candle, the thicker the wick--A wick that is too small will cause dripping, and one that is too large will smoke.

3. Wicks are covered with wax in three different ways:

a. Dipping:

1. The old-time candle maker dipped his candles over and over in hot tallow. Today candles are dipped automatically, and many candles can be made in exactly the same shape at the same time.

2. To form a standard-size 3/4 inch diameter candle, the wick must be dipped 24 to 30 times, depending

on the temperature of the room and the wax. If candles are dipped too quickly or not cooled long enough, they will become blistered.

b. Molding:

1. The difference between dipped candles and molded candles is very simple. Instead of dipping the candle in hot wax, the wax is poured into molds. Dinner candles, birthday candles, and novelty shapes such as Christmas trees, snowmen, and Halloween pumpkins can all be fashioned by molds.

c. Rolling:

1. The third method of candle making is very similar to wrapping dough around a filling. The was is kneaded and rolled into a sheet. Beeswax is the best wax for these candles, since it will not crack when it is rolled out. The candles have borrowed their name from the bees as well as using their wax. They are called honeycomb candles because the wax looks like the tiny cells in a honeycomb.

4. Candle Wax.

   a. Beeswax

   b. Tallow

   c. Spermaceti wax from the sperm whale.

   d. Chemists made stearic acid from cheap animal fats

   e. Plant waxes

   f. Petroleum or refining paraffin waxes

5. Dyes

   a. The delicate colors of candles come from aniline or oil dyes.

6. Uses of Candles

   a. Decorations

   b. Power failure from storms or earthquakes, we still need candlelight.

   c. Hospitals keep a large stock of candles for emergencies.

   d. Churches burn candles as part of their services.

   e. Long-lasting candles are burned as memorials.

   f. Their greatest appeal is that they add warmth and cheer.

   g. A Christmas candle shining in a window is a sign of goodwill toward all.

   h. Formaldehyde Candles decomposes into formaldehyde gas as the candle burns. They have been used for fumigation of schools, hospitals, and homes after an outbreak of contagious disease.

ACTIVITIES

1. See pictures and films on candle making.
2. Take a trip to all factories that are close.
3. Interview all the different workers.

INFORMATIONAL

1. Read about the making of candles and the work which is done.
2. Consult newspapers for information.
3. Make Reading Charts about the workers. Read as the occasion arises.
4. As each helper is studied have an exhibit of the tools.
5. Handle some of the worker's tools to see how hard it is to use them skillfully.
6. Learn what colors candles are painted.

EXPRESSIONAL

1. Discuss and write about what was seen at the candle factory.
2. Make up riddles about workers and candles and the buildings.
3. Draw pictures of different types of candles. Make them into a booklet.
4. Make jigsaw puzzles of different candles.

EVALUATIONAL

1. Have an exhibit of all the different kinds of candles.

WHAT WORKERS HAD A PART IN BUILDING THE CANDLE FACTORY

1. Real estate agent
2. Architect
3. Contractor
4. Carpenter
5. Carpenter's Helper
6. Brick layer
7. Hod carrier
8. Stone Mason
9. Plumber
10. Electrician
11. Painter
12. Paper hanger
13. Welder
14. Riveter
15. Excavator
16. Custodian

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